DOCUMENT RESUME

ED 302 191 IR 013 550

AUTHOR Peterson, George
TITLE Geography, Images and Technology. Innovations in Education and Publishing at the National Geographic Society.
PUB DATE Jun 86
NOTE 12p.; Paper presented at an Invitational Conference on Multimedia in Education (Cupertino, CA, June 19-20, 1986). For the complete journal, see IR 013 538.
PUB TYPE Journal Articles (080) -- Speeches/Conference Papers (150)
JOURNAL CIT Learning Tomorrow: Journal of the Apple Education Advisory Council; n3 p263-274 Spr 1987

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Audiovisual Aids; *Creativity; *Educational Technology; *Geography; *Material Development; Nonprint Media; *Periodicals; *Publishing Industry
IDENTIFIERS *National Geographic Society

ABSTRACT

This paper discusses the role of the National Geographic Society (NGS) in providing educational materials on geography, from the National Geographic magazine to future innovative educational technologies. The changing nature of technology, communications, and the role of the creative mind are described in remarks quoted from the Society's President, Gilbert Grosvenor. In particular, the imminent widespread use of creative, educationally sound software for computers and videodisks is stressed and the NGS's role in the development of such software is described. It is concluded, however, that the development of high quality, innovative materials is not enough: the NGS must also join forces with policymakers at the federal, state, and local levels, and work with school systems and hardware manufacturers. (EW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☒ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED302191

Geography, Images, and Technology

Innovations in Education and Publishing at the National Geographic Society
George Peterson

IR013550

BEST COPY AVAILABLE

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Paul Rockman
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

The National Geographic Society

In spite of its history of innovation, the Society has always respected the traditional and the familiar. But it is also characteristic of the Society that its leaders have never shied from the challenge of seeking the unfamiliar, whether it be found in the stratosphere or the depths of the ocean. And geographic and scientific exploration have always been closely paralleled by journalistic and technological innovation in publishing.

On January 13, 1888, a group of 33 geographers and scientists founded the National Geographic Society in Washington, D.C., and then launched *National Geographic* magazine, the aim being to increase and diffuse geographic knowledge. The first issue, put together by a volunteer staff in a small rented room, was short and technical. And it contained the names of all members, who even ten years later numbered only 1,400.

In 1897, Alexander Graham Bell became president of the Society. The organization was then $2,000 in debt. Bell hired the Society's first paid employees, among them his future son-in-law, Gilbert Hovey Grosvenor, whose $1,200 annual salary Bell paid out of his own pocket for nearly six years.

Under young Grosvenor's leadership, circulation expanded to more than 10,000 by 1905—the year the Society published its first photographic series, 11 pages of black-and-white pictures of the Forbidden City (Lhasa, Tibet). The first color series, hand-tinted scenes from Korea and China, was published in 1910. The magazine's earliest autochrome was published in 1914, followed in 1916 by the first natural-color series, depicting dancers Ted Shawn and Ruth St. Denis in an article titled "The Land of the Best."

3

By 1920, circulation was more than 700,000. Its increase during the war years, when the magazine concentrated on the geography of the battle-torn countries, was phenomenal. The magazine's maps, particularly one depicting the Western Front, were in demand all over the world.

Grosvenor's leadership continued to produce editorial and technical firsts. In 1926, a photographic team made the first natural-color photographs of life beneath the sea, immortalizing a hogfish and a host of other flora and fauna with the aid of blinding explosions of flash powder fired above the surface of the water. The first photographs from the stratosphere were taken in 1935 from aboard the gondola of *Explorer II*, which, on an expedition sponsored by the Society and the U.S. Army Air Corps, rose nearly 14 miles above the surface of the earth.

Grosvenor's editorial and business stewardship continued until his retirement in 1954. He was succeeded as editor and president by John Oliver LaGorce, his associate of more than 50 years. Then in 1957, Grosvenor's son, Melville Bell Grosvenor, became editor and president, the beginning of an era of dramatic change and growth for the Society.

When MBG, as he was known, decided to leave the Society's printer of more than 60 years, he announced to his staff: "This will be the first magazine to print color on every page." It is reported that a less-imaginative officer moaned that this would be the demise of the *Geographic*: "He'll break the Society." Instead, Grosvenor more than doubled Society membership—to about 5 million—began a dynamic book program, published our first atlas and globe, and launched one of television's longest-running documentary series.

By 1960, the Society had moved into the era of electronic publishing, greatly expanding the means at its disposal to diffuse geographic knowledge, and at the same time dramatically enlarging both its audience and the impact of its message. When MBG retired as editor in 1967, he was followed by Frederick G. Vosburgh, who kept the momentum going and broke new ground as the Society continued to evolve and respond to members' concerns.

Gilbert M. Grosvenor, now the Society's president, describes some of the changes he witnessed in the decade (from 1970 to 1980) of his editorship: Our writers, photographers, and filmmakers were finding change everywhere they traveled, as timeless lands of nomads in the Middle East became battle zones and once-romantic jungle trails became highways to war in Southeast Asia and Africa. The need for geographic knowledge and understanding to help interpret these events grew with each year, as did our ability to meet the challenge.

"Our fledgling book program blossomed into one of the largest publishing operations of its kind in the world, reaching new levels of quality each year. Our policy of diversification and lateral growth led us into an area in which I have taken a special personal interest. As members of the 'baby boom' of the 1940s and 1950s passed through school and into maturity, children seemed somehow to grow out of fashion as a topic of personal discussion. The Society had for half a century published the weekly *School Bulletin*, but I felt we could reach more children better with a different sort of publication. In 1975, we published the first issue of *National Geographic World*, a monthly magazine for children eight years old and up. Since its first issue, *World* has attained the largest circulation of any magazine of its kind."

"Through our hundreds of educational filmstrips, films, videotapes, and multimedia kits, the Society has made available to schools high-quality materials in a broad variety of subjects at very reasonable costs. In 1984, we finally acted on the long-expressed desires of our membership for travel information that is at once educational and entertaining. We began publication of the Society's first new magazine for adults since 1888—*National Geographic Traveler*."

The Society and Geography

"Consider a snowflake," wrote National Geographic *editor Wilbur E. Garrett in his introduction to the magazine's most recent index, "as it touches your hand—intricate, delicate, beautiful. For one small moment it is present; then it melts into the past. Yet if you had caught the snowflake on a chilled glass slide and photographed it, that image would always live in the present, permitting you to study and enjoy it at your leisure—enhancing your appreciation of all future snowflakes. That is the essence of what the* Geographic *has been trying to do since 1888—capture and preserve significant present moments with as little distortion as possible."*

The National Geographic Society's mission to increase and diffuse geographic knowledge is fulfilled through exploration and research and is communicated through the creative use of maps, photographs, and words—which together capture an image of the exotic, beautiful, and often unforgiving world beyond our doorsteps and out of reach of our classrooms. Like snowflakes, the contemporary world of geography is characterized by diversity and, as with snowflakes, there are patterns in this complex universe that can be exposed to study.

Geography is often described as an integrative discipline. Novelist James Michener noted, "The more I work in the social studies field, the more convinced I become that geography is the foundation of all."

Geographers, as they attempt to comprehend the complex physical and social patterns of today's world, synthesize work from related disciplines in the physical sciences (geology, meteorology) and the social (economics, sociology).

Geography is, perhaps more than any other, a visual discipline. Maps are one of the primary tools of the geographer. Randy Smith, associate professor of geography at Ohio State University, describes the geographic perspective as one that "stresses, at the outset, where phenomena are located, through the use of maps. No other academic subject begins that way. In so doing, it gives a visual impression of the complexity of the contemporary world. At present, most students are not aware of such complexity. They cannot appreciate just how different, in physical and human terms, various parts of their own country are, or how their own country differs from other parts of the world."

Maps help people to identify and analyze physical and human phenomena and the ways in which they are interrelated. The map is one symbol composed of many other symbols—a translation of perceived reality. Maps are made up of many symbols in the same way that essays consist of words, sentences, and paragraphs—a collection of symbols with accepted meanings, selected and organized by analytic and creative minds to communicate a reality too complex to reproduce in any other way. The photograph and the moving picture are also symbols, reproducing images of reality, frozen in time. Just as a black line—a thin trail of ink on wood pulp ground to paper—can become a highway to adventure, a photograph can be a key to geographic knowledge and understanding and a stimulus to further inquiry.

Literally, geography means "writing about the earth." But it is perhaps better interpreted as a "way of thinking" about the earth. The visual image is an extension of that thought process. Some might even say the image precedes the thought. It is indisputable that the visual image is changing the way we think, the way we *see* the world around us, the way we *perceive* our relationship to it.

7

Technology, Communication, and the Role of the Creative Mind

"Are creative people dinosaurs about to be imprisoned in hardware, captured in cable, shot with lasers and light beams? Will engineers—so brilliant in electronics but frequently so lacking in communications skills—control content? I submit to you that today there is greater need and greater relevance for creativity than ever. While today's capacity to transmit information is limitless, today's production of clear, valid, enriching information is practically nonexistent."

Society President Gilbert M. Grosvenor, in his remarks this summer before the World Congress on Education and Technology in Vancouver, British Columbia, reflected on the changing nature of technology, communication, and the role of the creative mind:

"The sheer appetite and magnitude of communications today will make it impossible for the average family not to OD on electronic junk without the inspiration of the creative mind to correct, to modify, to elevate, and to enlighten a viewer. We must seek out the magic of creativity."

"The kind of magic I have in mind comes in on a beam of light from some unknown somewhere else. I think of J.R.R. Tolkien. The year is 1928. He sits in his study at Oxford correcting a student's thesis. His life to that point? His father's death in South Africa when Tolkien was a child, his mother's religious conversion, subsequent separation from her family, and her premature death; his years as an orphan, under a guardian who forbade him to see the woman he loved; his friendships at school, blown away during the first day on the Somme, when the stupidity of generals took 20,000 lives in a single day. All of this is behind him as he sat reading the thesis. The student had, for some reason, left a page blank. When Tolkien came to it, he picked up his pen and wrote on the blank page: 'In a hole in the ground there lived a hobbit.' Thus launched one of the great literary careers of our century."

"No machine, no electronic wizardry, can replace the single act of creation, the inspired moment that arrives in its own time, at its own speed, and from its own unknown source. It is what drives all the rest of it; industries are built upon it. Regardless of how technology increases the speed, the volume, and the nature of communication, the value of the content—the very essence—will begin and end with the creative personality."

"In a way, technology is no stranger in the classroom. The printed page is a technological teachers' aid. But why haven't we advanced further? Why do we still rely so heavily on traditional media and fail to take advantage of computers? Why do we continue to rely on filmstrip projectors when the television monitor is so much more powerful? Television is after all universally acknowledged as the second teacher—an electronic teacher whose magical moving images capture children's attention with an ease unmatched by even the most mesmerizing storyteller. Computers with the right software can work magic, too."

"If we can harness them intellectually, I am convinced that the television monitor, the computer, and the telephone are destined to transform the way we learn and the way we teach, and I intend to put my money where my convictions are. The technologies are available, and the costs are predictably dropping."

The NGS and Education

The National Geographic Society's mission to increase and diffuse knowledge in the geographic sciences can be fulfilled only if we do our best to support improved education in the classroom. We bring to this task our skills and reputation as an educational publisher, our success and experience in the development and distribution of classroom materials in science and geography, the highest standards for editorial content and production quality, and a commitment to the application of innovative technologies to classroom education.

We would like to see a videodisc player in every classroom, and we would like to see it hooked up to a computer. Imagine how much knowledge a teacher could impart using a videodisc of every photograph ever published in *National Geographic* magazine. Imagine a geography field trip under the control of the student—a tour of California, for example, that permits an inquisitive mind to explore freely across space and time to experience, instantaneously, relationships between places and interactions between peoples and landscapes.

We are convinced that we're on the threshold of a dramatic breakthrough that will see a proliferation of creative, educationally sound software for computers and videodiscs—and we're committed to playing an active role in developing that software. We've already produced one interactive videodisc, "Whales," which combines motion-picture footage, stills, and text frames—and there will be more discs in the near future.

For computers, we're now working on several software programs to be released in 1987, covering a range of subject areas and grade levels. These programs will be fully integrated with richly illustrated reading materials. Our goal is to produce simple, flexible programs appropriate for typical schools, utilizing the worldwide resources of the National Geographic Society and the best of traditional educational materials and methods.

We believe these efforts are a transitional phase to an era when more fully interactive educational programs will be as common as books on library shelves. Toward that end, we're making major investments in developmental projects involving telecommunications networks and highly interactive computer and optical technologies. One of our goals for the not-too-distant future is to publish an interactive atlas of the world.

But there is much to be done before that vision becomes a reality. It is clear that excellence of materials, by itself, will not ensure adoption by our nation's schools. We will need to forge alliances across a broad spectrum of interests if we are collectively to have an impact on the improvement of teaching methods and materials. We will need partners. We will need to join forces with policymakers at the federal, state, and local levels. We will need to work with school systems and with hardware manufacturers.

We are determined to commit the Society's resources to those projects that promise maximum impact and stand the best chance of attracting additional outside funding and support. We cannot do it alone and, even if we believed we could, it would not be a wise course. We are convinced that only through partnerships will we be able to generate the energy, the enthusiasm, and the financial resources necessary to put technology to effective use in the classroom.

George A. Peterson

George A. Peterson is the Director of the Educational Media Division of the National Geographic Society. With a B.A. from Princeton and an M.S. in Journalism from Columbia University, Mr. Peterson worked as a freelance photographer, writer, and magazine designer before joining the National Geographic Society in 1970. Currently, Mr. Peterson directs the Society's creation and production of filmstrips, videodiscs, computer software, and classroom resource guides. Also under his direction is the Geography Education Outreach Program, a public service effort to improve geography education materials and teaching methods.

12